

IN THE CLAIMS:

Amend the claims as follows:

Claim 1-75. (Canceled)

76. (New) A method of assessing an individual for a cancer condition comprising;

providing a tissue sample obtained from said individual,

determining the presence in said sample of one or more cells comprising a plexinB1 nucleic acid sequence having one or more mutations in a coding region of said plexinB1 nucleic acid sequence,

the presence of said one or more cells being indicative of said individual having a cancer condition.

77. (New) A method according to claim 76, wherein the cancer is metastatic.

78. (New) A method according to claim 76, wherein the cancer is invasive.

79. (New) A method according to claim 76, wherein said one or more mutations alter the activity of a plexin polypeptide encoded by said nucleic acid.

80. (New) A method according to claim 76, wherein the plexin B1 polypeptide comprises one or more mutations in the cytoplasmic domain thereof.

81. (New) A method according to claim 76, wherein the one or more mutations are at one or more mutation sites selected from the group consisting of T1697, T1733, T1776, T1795, T1802, P1597, P1798, F1711, G1602, L1815, N1735, R1904, A1730, G1728, and K1613.

82. (New) A method according to claim 81, wherein the one or more mutations are selected from the group consisting of T1697A, T1733I, T1776A, T1795A, T1802A, P1597L, P1597S, P1798S, F1711I, G1602T, L1815P, N1735S, R1904W, A1730T, G1728S, L1815F, and K1613E.

83. (New) A method according to claim 82, wherein the polypeptide comprises a mutation selected from the group consisting of T1795A, P1597S, P1597L, and L1815P.

84. (New) A method according to claim 82, wherein the polypeptide comprises the mutation T1795A.

85. (New) A method according to claim 76, wherein the cancer condition is prostate cancer or breast cancer.

86. (New) A method according to claim 76, wherein the presence of said one or more cells is determined by detecting the presence of said plexinB1 polypeptide.

87. (New) A method of determining the invasiveness of a cancer cell in a sample obtained from an individual, the method comprising,

determining the presence or absence in said cell of a plexin B1 polypeptide having one or more mutations therein,

the presence of said plexin B1 polypeptide being indicative that the cell is invasive.

88. (New) A method according to claim 87, wherein said one or more mutations alter the activity of a plexin polypeptide.

89. (New) A method according to claim 87, wherein the plexinB1 polypeptide comprises one or more mutations in the cytoplasmic domain thereof.

90. (New) A method according to claim 89, wherein the one or more mutations are at one or more mutation sites selected from the group consisting of T1697, T1733, T1776, T1795, T1802, P1597, P1798, F1711, G1602, L1815, N1735, R1904, A1730, G1728, and K1613.

91. (New) A method according to claim 90, wherein the one or more mutations are selected from the group consisting of T1697A, T1733I, T1776A, T1795A, T1802A, P1597L, P1597S, P1798S, F1711I, G1602T, L1815P, N1735S, R1904W, A1730T, G1728S, L1815F, and K1613E.

92. (New) A method according to claim 91, wherein the polypeptide comprises a mutation selected from the group consisting of T1795A, P1597L, P1597S, and L1815P.

93. (New) A method according to claim 90, wherein the polypeptide comprises the mutation T1795A.

94. (New) A method according to claim 76, wherein the cancer condition is prostate cancer or breast cancer.

95. (New) A method according to claim 87, wherein the presence of said one or more cells is determined by detecting the presence of said plexinB1 polypeptide.

96. (New) A method of identifying and/or obtaining a putative anti-cancer agent, the method comprising;

contacting a plexinB1 polypeptide with a test compound, wherein the plexinB1 polypeptide comprises one or more mutations, and;

determining the activity of the plexinB1 polypeptide in the presence relative to the absence of test compound.

97. (New) A method according to claim 96, wherein the one or more mutations are in the cytoplasmic domain of the plexinB1 polypeptide.

98. (New) A method according to claim 97, wherein the one or more mutations are at one or more mutation sites selected from the group consisting of T1697, T1733, T1776, T1795, T1802, P1597, P1798, F1711, G1602, L1815, N1735, R1904, A1730, G1728, and K1613.

99. (New) A method according to claim 98, wherein the one or more mutations are selected from the group consisting of T1697A, T1733I, T1776A, T1795A, T1802A, P1597L, P1597S, P1798S, F1711I, G1602T, L1815P, N1735S, R1904W, A1730T, G1728S, L1815F, and K1613E.

100. (New) A method according to claim 96, wherein the plexinB1 polypeptide is expressed on the surface of a cell.

101. (New) A method according to claim 100, wherein the activity is plexinB1-mediated anchorage independent growth of said cell.

102. (New) A method according to claim 96, wherein the activity of the plexinB1 polypeptide is determined by determining the binding of said polypeptide to one or more of semaphorin4D, active Rac1, Met, PDZ-RhoGEF and LARG and other components of the semaphorin signalling pathway interacting with plexinB1.

103. (New) A method according to claim 96, wherein the activity of the plexinB1 polypeptide is determined by determining the activation of Rho GTPase.

104. (New) A method according to claim 96, comprising the further step of:
contacting a wild-type plexinB1 polypeptide with the test compound, and;
determining the activity of the wild-type plexinB1 polypeptide.

105. (New) A method according to claim 96, comprising the further steps of;
contacting the mutant plexinB1 polypeptide with the test compound in the
presence of a wild-type plexinB1, and;
determining the activity of the wild-type plexinB1 polypeptide.

106. (New) A method of identifying and/or obtaining a compound as a putative
anti-cancer agent, the method comprising;
contacting a plexinB1 nucleic acid with a test compound, wherein the plexinB1
nucleic acid comprises one or more mutations in a coding region of the nucleic acid,
and;
determining the expression of the plexinB1 nucleic acid in the presence relative
to the absence of test compound.

107. (New) A method according to claim 106, wherein the one or more
mutations are in a region of the nucleic acid which encodes the cytoplasmic domain of
the plexinB1 polypeptide.

108. (New) A method according to claim 107, wherein the one or more mutations are at one or more mutation sites selected from the group consisting of 5059, 5060, 5074, 5107, 5359, 5401, 5452, 5458, 5468, 5474, 5596, 5653, 5662, 5674, 5713, 5714, and 5980 of the plexinB1 coding sequence.

109. (New) A method according to claim 107, wherein the one or more mutations are selected from the group consisting of C5059T, C5060T, G5074A, A5107G, A5359G, T5401A, G5452A, G5458A, C5468T, A5474G, A5596G, A5653G, C5662T, A5674G, C5713T, T5714C and C5980T.

110. (New) A method according to claim 106, further comprising determining the increase in the expression of wild-type plexin B1 in the presence of said test compound.

111. (New) A method according to claim 106, comprising determining a decrease in the expression of mutant plexin B1 in the presence of said test compound

112. (New) A method according to claim 96, comprising identifying the test compound as a putative anti-cancer agent.

113. (New) A method of screening for an antibody molecule specific for a mutant plexinB1, the method comprising;

providing a population of antibody molecules specific for mutant plexinB1,
contacting said population with a normal plexinB1 polypeptide,

identifying one or more members of said population which bind preferentially to mutant plexinB1 relative to normal plexinB1.

114. (New) An antibody molecule which specifically binds to a mutant plexinB1 polypeptide.